Small
Business
Innovation
Research

Computational Fluid Dynamics Package for Massively Parallel Supercomputing

Nektonics, Inc.
Cambridge, MA

INNOVATION

Developed Code to Model Three Dimensional Fluid Flow

ACCOMPLISHMENTS

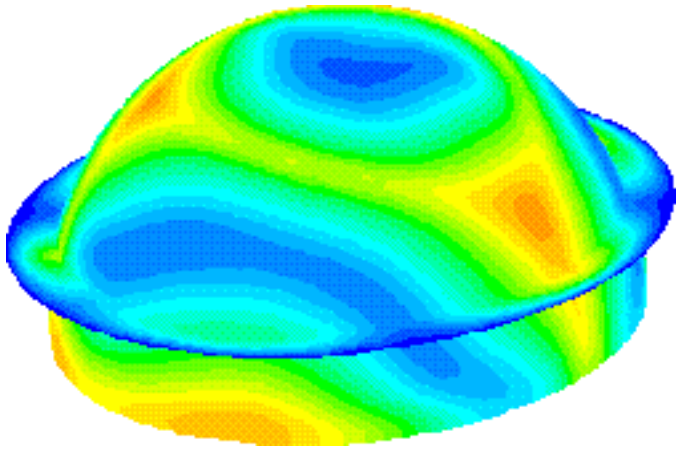
- Developed parallel fluid code for use on NASA supercomputers
- Commercialized and licensed NEKTON, the Serial Industrial Version

COMMERCIALIZATION

- NEKTON Code being used in 40 Universities
- Leading tool in coatings analysis
- Used by 35 major US corporations, including 3M, Xerox, Dupont, IBM to improve manufacturing processes, lower cost,and provide higher quality, and faster process improvement cycles
- Annual gross licensing revenues $750K

GOVERNMENT/SCIENCE APPLICATIONS

- GSFC licensed Nekton III and uses it to model surface lava flows. More complex lava and Earth's mantle flows will use new parallel code.



Convection in a Rotating Hemispherical Shell Model of Atmosphere of Giant Planet: Temperature Field

GOVERNMENT/SCIENCE APPLICATIONS

- GSFC uses new parallel code to model atmosphere of giant planets such as Jupiter
- Coating stability analysis at MIT
- Bio-medical applications - flow through heart at MIT
- Two-layer coatings at McMaster University
- Free surfaces of Molten Glass at South Carolina State

Points of Contact:
- NASA - Anil Deane, 301-286-7803
- Nektonics - Edward Bullister; 781-868-0101

Goddard Space Flight Center

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